A TEACHING HOSPITAL FOR OKLAHOMA CITY, OKLAHOMA

By
LARRY KEN BLACKLEDGE
Bachelor of Architecture
Oklahoma State University
Stillwater, Oklahoma
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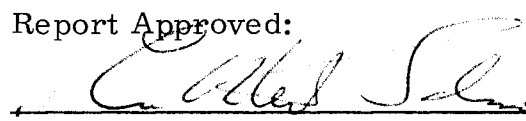
A TEACHING HOSPITAL

Report Approved:



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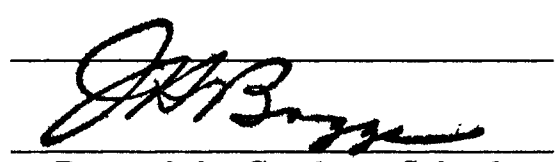

Dean of the Graduate School

PREFACE

No person related to the medical field can possibly give all the information needed for the design of a hospital. It is a collective process whereby a group of persons from all departments give the Architect or planner the essential requirements where he takes them and arranges them into a workable solution.

Very few planners have had the chance to do hospital design and those who do are handicapped because of the lack of time and the day by day changing of medical requirements. By the time this report and design are finished, many changes and new innovations will have taken place.

But a hospital, due to its complexity, is a problem with many major facets that will not be changed and should be dealt with at one time or another during an Architectural student's academic life.

There have been many persons who have donated their time to help me with this report and design and it is my intention not to single any one person out because all information and direction given is most important and has been most helpful. Therefore, it is my feeling that no one person is considered more important than another.

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CHAPTER I

THE PROBLEM

Space, time, and function are fundamental elements of any design problem. They hold true for any type of planned environment and are dealt with most carefully in all cases. Although all three are important there are cases where one may become more important than the others. In a warehouse, for example, space and function are more important than time, whereas in a factory the time and function are basically more important than space.

In this report a Teaching Hospital's main requirements are time and function. Function is the basic requirement upon which time is dependent. All departments and areas must be designed with the personnel and students -- given the best possible benefit.

This report deals with a hospital to fulfill the medical needs of a state rather than the needs of a particular district or section of a state or city. A student cannot learn unless he is confronted with problems and taught how to solve them. Therefore, all medical science and treatment that will be developed or is now used should be incorporated into this hospital, giving in it the knowledge and facilities to handle any problem that might be brought to its door.

In order to achieve this, a campus must be planned to handle the staff, personnel, students, and patients in a matter of unity towards medicine and the related fields.

A teaching hospital is a compromise between the needs of the patients and those of the taught. It is also a place where research is pursued in the interest of patients. The specialized modern needs of patient care, of teaching and research must be catered for and a degree of flexibility must be introduced into the design to allow for an unknown future.

The future? what can be said about it. The future hospital plant must take into consideration not only population increase but also changing medical developments, the social factors which affect the public demand for service, and the great shifts in out population. As our knowledge of medicine continues to grow perhaps greater numbers of patients will be cared for in the out-patient departments and treated on a self-care basis. Whereas the nursing units will perhaps become areas only for the intensive care of patients who require specialized treatment or are of the elderly age group. No one person can say what the future holds in store for medical science but with proper planning and functional relationships a hospital can be designed to serve the future as well as the present.

CHAPTER II

PLANNING DATA

A teaching hospital undertakes the teaching of undergraduate and postgraduate medical students and the undertaking of clinical and scientific research. The provision of these facilities complicates planning and design considerably. The medical school is not merely to be on the same site as the hospital but to be embedded in it to perhaps form an integral part of the same structure or within a reasonable proximity.

There are the hospital units and departments, such as wards; diagnostic laboratories for pathology and other specialties; out-patient and casualty departments; x-ray and physiotherapy departments; kitchen and catering; sterile supply and pharmacy. In a teaching hospital, whether the medical school is there or not, almost all of these facilities will be expanded in some way. Student teaching accomodation of some kind will be required at the wards and in the out-patient department; since highly specialized forms of investigation and treatment of patients tend to be undertaken more in teaching hospitals than in others, the demands on the diagnostic laboratories and on the diagnostic and treatment departments will tend to be larger; and even the supply services will have more demands put on them, if only by the need to provide some services for students.

With the Medical School on the site, particularly when it forms an integral part of the hospital structure, the central supply and auxiliary services are expanded still further, and all these Medical School departments come into the picture -- clinical and scientific research laboratories for the clinical professors, corresponding facilities for the pathologists, bacteriologists, biochemists and physicists and teaching and student accommodation.

The problems of hospital design are not made easy by enlarging the hospital itself and grafting to it a medical school organization.

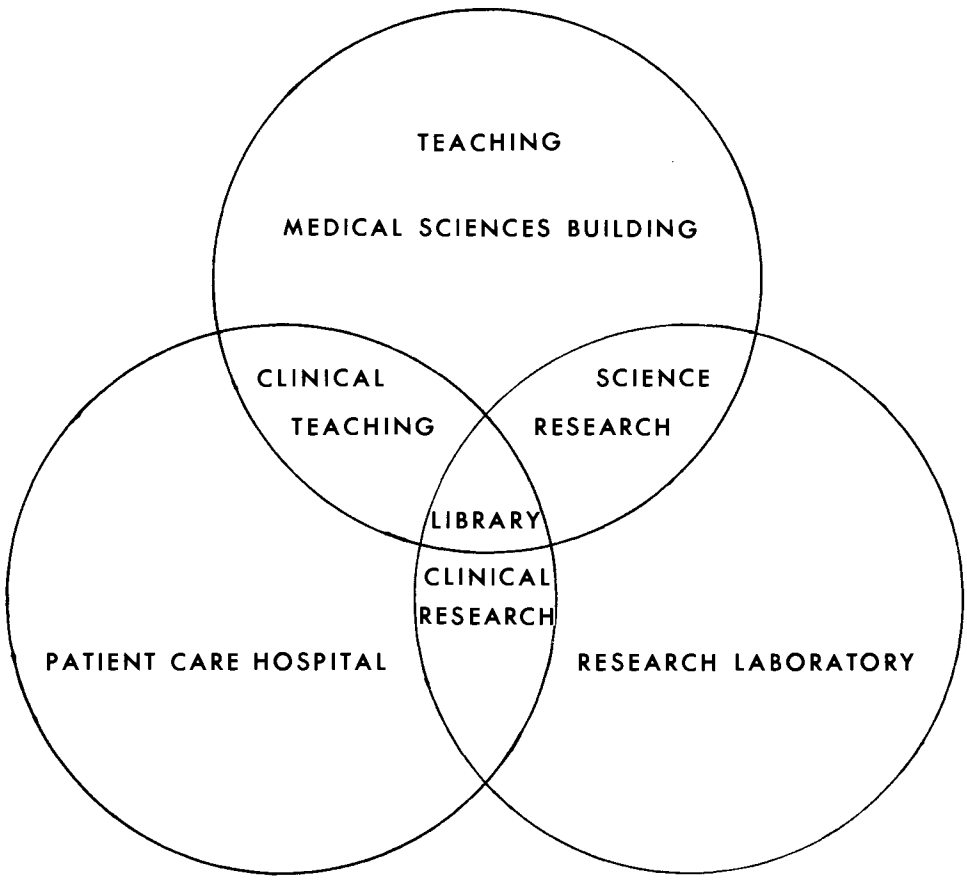
New Problems Arise

One problem arises from the need for close association between some parts of the Medical School and hospital, especially the professional departments and the ward units to which they are attached, the diagnostic laboratories and the para-clinical research laboratories.

The next problem comes from the need to separate so far as possible different circulation systems. The hospital has one of its own while the Medical School produces circulation for student teaching and research activities; the three are interrelated in various ways and may touch or overlap each other, but the efficiency of one must not be prejudiced by either of the others.

The combined organization then, the hospital and the medical school, has three separate functions, which have some points in common, but whose essential characteristics and requirements are quite different -- patient treatment, student teaching, and scientific research.

FIGURE NUMBER 1



INTERRELATIONSHIP AMONG VARIOUS MEDICAL SCHOOL FACILITIES

CHAPTER III

PATIENT TREATMENT AND CARE

It is generally recognized, not only that a very large proportion of the problems of ill health presented to the doctor and nurse are emotional in origin, but that the course and prognosis of all disease, are significantly influenced by the emotional reaction of the patient to his disease. In other words, happiness and peace of mind, a sense of security and comfort, contribute more than anything else to health and to the recovery from disease or surgery.

To most patients submission to hospital calls for courage and adjustment which may create anxiety and even alarm. It may undermine self-confidence and a sense of security, and this may add gravely to the significance of the original illness.

It is essential therefore in the first place that hospitals should endeavor to make the transition for the patient as gentle as possible and try to create an atmosphere which takes its cue from the home. The patient's routine comfort, his privacy, the avoidance of unnecessary disturbance and noise, an atmosphere of rest rather than one of restlessness, should be an objective of hospital planning.

Progressive Patient Care is one concept of improvement which shows promise and which has aroused widespread interest. The central theme of the Progressive Patient Care concept is the organization of facilities,

services, and staff around the medical and nursing needs of the patient. Patients are grouped according to their degree of illness and need for care, and the staff serving each group of patients is selected and trained to provide the kind of services needed by that group.

There are five elements in the concept of Progressive Patient Care. Four are contained within the hospital. The fifth is an extension of services into the community. These elements are: Intensive Care, Intermediate Care, Self Care, Long Term Care, and Organized Home Care.

In the Intensive Care unit, the critically and seriously ill patients are concentrated regardless of diagnosis. These patients are under constant audio-visual observation of the nurse, with life-saving techniques and equipment immediately available, and with nursing staff specially selected and trained to care for this type of patient.

In the Intermediate Care unit are concentrated patients requiring a moderate amount of nursing care, not of an emergency nature, who may be ambulatory for short periods, and who are beginning to participate in the planning of their own care.

The Self Care unit concentrates patients who are physically self-sufficient and require diagnostic and convalescent care in hometype accommodations.

In the Long Term Care unit are concentrated patients requiring prolonged care in which skilled medical and nursing care play an essential part.

Home Care, the fifth element of Progressive Patient Care, extends hospital services into the home to assist the physician in the care of his patients. This can reduce the need for hospitalization and still make the many services of hospitals available to the patient and his family.

The other concept of patient care, and the one most widely used, is the nursing station patient room relationship. In this method the rooms are generally two patient rooms with units of twenty patients or more. The units are broken into types of medical care but not as to the condition of the patient as in progressive patient care. This method is generally the best method for medical school hospitals because of the students education. When a doctor has his students with him on a teaching tour, they can group around the bed of the patient and not disturb a large group of patients.

It gives the patient more privacy and lends to a more pleasing atmosphere towards his recovery. In a teaching hospital with two to three times the traffic a non-teaching hospital has, a study must be made to limit the amount of time and distance that is required to move a student or nurse from one part of the hospital to another in the most direct non-conflicting route.

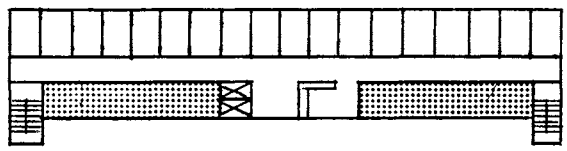
One of the great difficulties of Nursing Unit planning is to achieve the correct balance between privacy for the patient and adequate supervision by the nursing staff. On Figure 2 I have shown several methods most commonly used. Plan 1 shows a single loaded corridor which is an inefficient plan with maximum travel distances from the nurses station to the patients room. This plan was originally used for special orientation. It offers poor observation of the patients. Plan 2 is the Double-Loaded corridor. This plan is more efficient but still retains the long corridors and the poor observation. This plan is the basic one used in hospitals for over 100 years. Plan 3 is the first real advance in Nursing Unit plans. The Double Corridor cuts the walking distance by many steps. This plan also centers all of the charting and

utility areas. But still the observation of all patients is not achieved. Plan 4 shows a further development of the double corridor scheme. The compact plan shortens the distances even more and gives the best possible view of all the patients. The view is further enhanced by using the "French Hospital" Room plan versus the "Conventional" room plan as illustrated in Figure 3. Therefore, with the hospital playing the role of the educator, the best possible methods of teaching must be applied and if one is to apply them properly the student must be exposed to the best possible conditions.

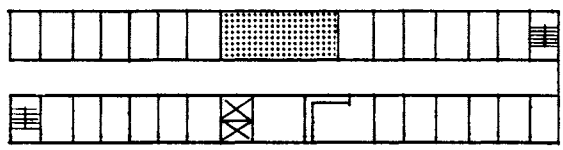
Very little has been said about the students education in the nursing unit. There are two conditions in which the students are placed. The first is as an observer. Groups of four to six students usually sophomores, go with an assigned doctor on his rounds. It is here that the doctor "thinks" aloud for the benefit of the student. In the students Junior and Senior years, he acts as the doctor. It is here where he first examines the patient, takes laboratory samples and makes a detailed report on the patients condition and recommends the proper treatment. All of this work and diagnosis is under the supervision of his assigned Doctor. In this way the student is learning by actual practice and the patient is benefited by being observed by perhaps several students and a member of the medical staff.

The requirements of the nursing station are enlarged by the addition of students. Besides separate student charting areas, laboratories, and conference rooms; lecture or demonstration areas must be provided.

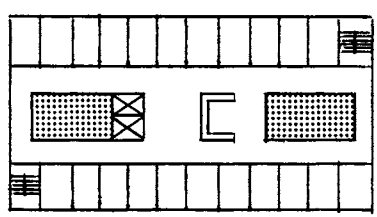
FIGURE NUMBER 2



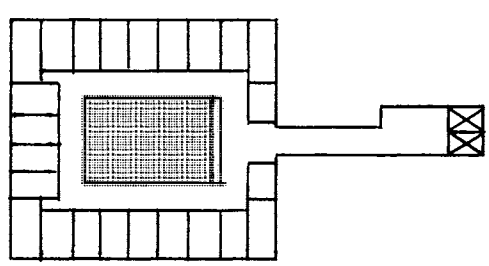
PLAN 1



PLAN 2



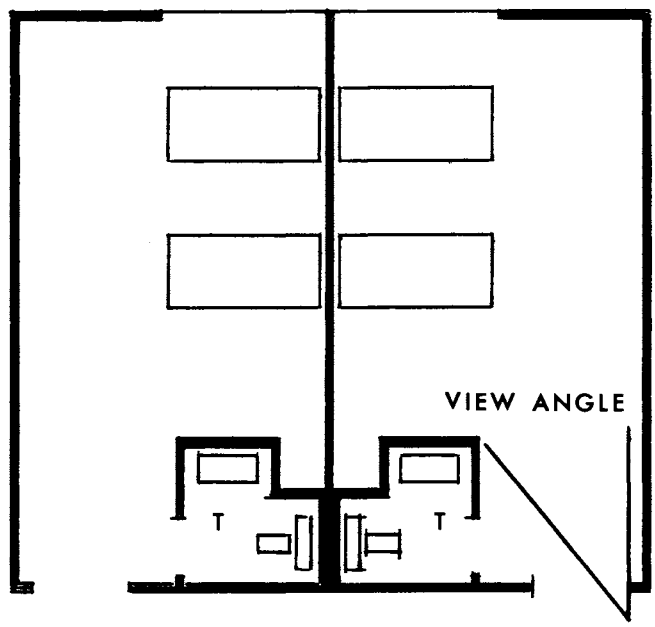
PLAN 3



PLAN 4

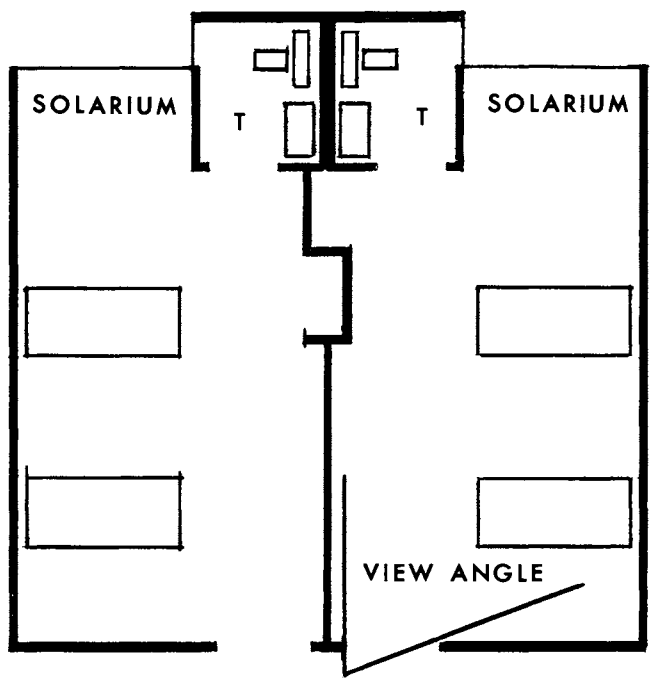
EVOLUTION OF NURSING UNITS

FIGURE NUMBER 3



CONVENTIONAL PLAN

MAXIMUM VIEW 36°



FRENCH HOSPITAL PLAN

MAXIMUM VIEW 64°

COMPARISON OF TYPICAL TWO BED ROOM

The Out Patient Department

A hospital does not consist of so many beds but essentially as a diagnostic and treatment center staffed by specialists in the various branches of medicine who have at their service departments such as x-ray, pathological laboratories, physiotherapy, etc., and whose resources are available to in-patients and out-patients alike. The out-patient department then is the department to which a patient can be referred for specialist consultation and for any investigation or treatment which does not require his admission as an in-patient.

In the out-patient department the student once again acts as the observer, the diagnostician and the treater under a doctors supervision. In this facility he finds every type of disease and must be able to call on his facilities to recognize what types of treatment or test to perform. The student is in this department generally in the morning hours but dependent on the load of patients and number of students this can and does vary.

With this the principal center for teaching specialized medicine, unusual and difficult cases frequently require specialized knowledge and skills and expensive equipment that the community hospitals cannot always afford. These community hospitals refer the patient to this hospital. This group of patients is considered small compared to the amount of patients who cannot afford regular medical treatment. 85%* of the clinics out-patient load comes from the low middle to the low income members of society.

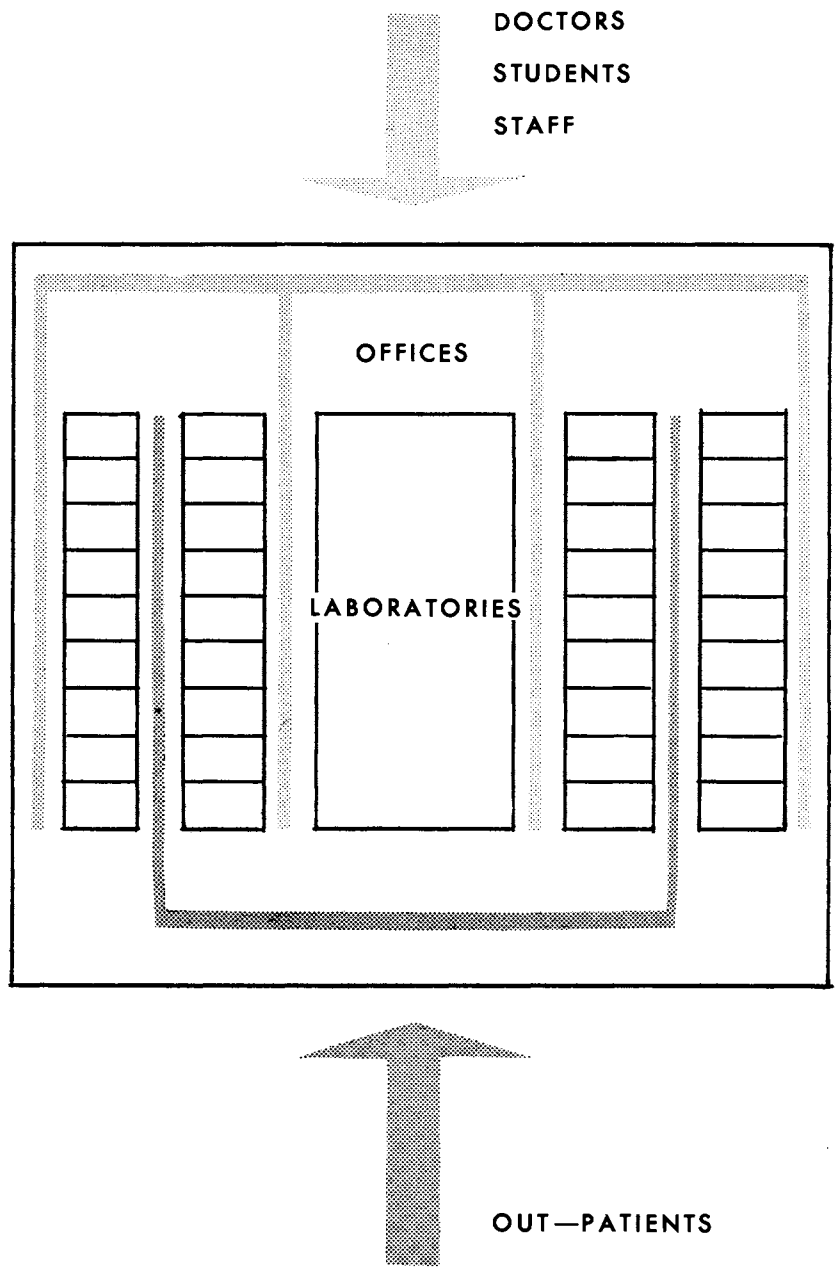
* "ATeaching Hospital For Oklahoma City, Oklahoma." Prepared by Bill Blair and Associates Architects and Engineers

When a patient arrives for the first time, he needs to register before being sent to either the medical clinic (where the largest percentage of out-patients first go) or the specialized clinics such as Eye or Obstetrics-Gynecology departments. After the preliminary registration the patient need not go back to re-register on subsequent visits.

An approach to environmental conditions in a hospital nursing unit has been discussed but it also applies for the out-patient portion of medicine. The out-patient must be made to feel that he is not being made a guinea pig while attending his clinic. A freedom of movement throughout his respective area without observation of the medical staff at work is one of the primary themes of my design solution. This problem, although impossible to solve 100 per cent, is best solved by the use of double corridors and staff student patient separation areas. Figure Four best illustrates this. This keeps all of the technical side of medicine away from the patients observation and offers greater flexibility to the doctors and students.

With the provision of all the needs, not only will it allow for the adaptation of training and thus make good medical care possible, it will also allow doctors to bring that knowledge and outlook which no one else can bring to the problems of planning and administration in medicine, and thus make good medical care probable. When students are able to see, doctors of distinction in any and every branch are able and willing to give serious and undivided attention to problems which affect medicine as a whole, to planning and policy and to administration, then and perhaps only then can we expect good students to enter the medical profession.

FIGURE NUMBER 4



RELATIONSHIP BETWEEN DOCTORS STUDENTS AND OUT—PATIENTS

CHAPTER IV

THE MEDICAL STUDENT

In the design of a Teaching Facility, every consideration is given to the student as far as his benefit towards learning is concerned. In a hospital, unlike other schools, a students function gives way to the functioning factors of the hospital. For a student to gain the best possible education he must be exposed to an environment which is designed to work for the patient and the staff.

In the Education Function of the hospital, two thirds of the students (excluding freshmen) are present in the hospital at any one time during the year. With the student load being so great, there must be special provisions included within the hospital to provide for on the spot medical teaching so as not to interupt the hospital function. This must be done in a way so as to cut down on the traffic that results from the student traversing from class to class or room to room. Besides the laboratories that are required, there should be provided adequate class rooms, conference room, auditoriums and libraries which would supplement the medical school.

Another possibility which could be considered is that the medical school be an adjoining part of the hospital. Taking this into consideration and weighing it against the method of complete separation with some supporting facilities in the hospital, it is my feeling that the

two would not work together. Besides the building becoming a large mass and the possibility of it losing its architectural identity to brick and stone, you are adding an additional eight to nine hundred persons into an already tightly designed area. Entering an additional flow requirement into the complexity of a Teaching Hospital can be resolved easier. It is my contention that the students see the hospital at its best working conditions.

Another factor in favor of separation is the increasing use of closed circuit television. A patient may, for example, in the near future be admitted into the hospital for the transplanting of his heart. Not only would this be of vital interest to every student but to all staff members and personnel of the hospital. With closed circuit television in use, all of these individuals would be exposed to the actual operation instead of insuing lectures and films.

Therefore, the medical student and his facilities should be handled as separate items with the exception of supporting and duplicating services within the hospital.

CHAPTER V

THE NURSING UNIT

The nursing unit is a physically and administratively distinct area for the care of a limited number of patients and including a number of intrinsic service areas. As explained earlier, the progressive care concept can not be applied to the University facility on a hospital-wide basis. It is possible that some elements of the plan can be utilized within departments but at this time the major clinical departments do not anticipate such a program.

A. The following components are considered intrinsic to the nursing unit.

1. Beds
2. Patient toilet facilities, baths, and showers
3. Nursing stations with charting space for nurses, doctors, and students.
4. Storage space for patients belongings
5. An administrative office for use by the ward managing person
6. Treatment Room
7. Examining Rooms (2)
8. Conference Rooms
9. Work Areas - Separate clean and dirty work rooms are absolutely essential

10. Medication Rooms

11. Doctor's Offices

12. Storage Areas (particularly for carriers, wheel chairs, and extra beds)

13. Toilet and lounge facilities for nursing personnel

14. A number of modifications will be suggested in subsequent paragraphs.

B. A number of facilities should be close to the nursing unit but are not considered necessarily intrinsic to the nursing unit.

1. Food and Diet Facilities

2. Housekeeping storage facilities

3. Waiting rooms for relative with toilet facilities

4. Additional conference rooms are a real necessity

5. Laboratory space, both student laboratories and clinical research facilities. It is possible that all clinical research cannot be constructed at the present time but sufficient space called conference day-rooms or any other such term must be left for development of these facilities in order to prevent encroachment on essential areas.

6. Facilities for the personnel including lockers, lounge, toilet facilities, and dressing rooms

7. Sleeping space for on-call personnel. This is considered quite important and the space should be located adjacent to units for whom on-call personnel will be utilized.

As pointed out earlier, the transition for the patient must be made as gentle as possible and try to create an atmosphere which takes its cue from the home. To achieve this, two patient rooms with an adjoining bath is becoming the most widely used method of patient care. In the teaching hospital method this gives the patient the privacy that is best but it also gives him a chance to share his convalescence with one to three other persons. The solarium is placed in the individual rooms which aids to the recovery by giving the patient the proper amount of sunlight. This minimizes the patient travel throughout the nursing unit floor. In my plan, to break up the monotony of the patient rooms, each room is supplied with corridor lounges which give a different atmosphere. Along with television, radio, and piped in music the patients physical room environment must be pleasing. Proper selection of colors, furniture, and materials all lend to the comfort and quicker recovery of the patients.

CHAPTER VI

DETERMINATION OF SITE

Should the Medical Center be in the center of population or could it be outside the center?

In large cities the concept of putting it in the center of population comes from the idea of slum clearance. If several square blocks of slums could be eradicated and replaced with a campus plan, it would be an advantage to the community. On the other hand, there is a question whether a Medical Center should be made the instrument of slum clearance if doing so is not entirely advantageous to the hospital. The sites should be selected to serve the best purpose of the center and not the purpose of slum clearance, unless the two happen to coincide.

A Medical Center is to serve the people of an entire state as well as teach and train future doctors and nurses. This does not limit the hospital to a "population location," as it would if this were to be a district hospital or even a central hospital. Oklahoma City has no central hospital except for the present medical center which I am disregarding.

Selecting a site outside of the central population center of the city seems to have the best advantages for a Medical Center, being that the patients will not only be coming from the city but the state.

Due to the complexity and its many varied elements, a large amount of land will be required for the Medical Center. Included in the site plan will be:

School of Medicine

Hospital

Children's Hospital

School of Nursing

Medical Research Foundation

Single Medical Student Housing

Married Medical Student Housing

Nursing Student Housing

Hotel or Motel (Privately owned and operated)

Supporting Facilities

- Power Plant
- Laundry
- Shopping Center

Library

Auditorium

Nursing Home (for aged)

Chapel

Medical Health Offices (State Offices)

On the following pages I have prepared several choices of sites and arrived at a final conclusion by process of elimination.

Selection Factors

Factors which will have to be taken into consideration on the location of the Medical Center are varied and often speculated but, with help from the department of sociology at Oklahoma State University and the Oklahoma City Planning Commission a report of the existing conditions and future predictions have been gathered and used as a guide.

To be taken into consideration during site selection:

Population density of existing area and areas under consideration.

Living conditions and wage earning means of population.

Possible future expansion of Campus.

Accessibility of site to city and state.

Location of a new Civic Center or sub-civic center might be incorporated into the design or location of the campus.

Free from noise, odors, and dust.

Other area factors which would provide handicaps to the Medical Center.

Site Number One

Boundaries:

North - Stanley Draper Expressway

South - South 15th Street

East - A.T. and S.F. Railroad Tracks

West - Western

Against Site Number One:

Air Port S.W. Section of Plot

Existing railroad through center of proposed site

Large amount of low income housing to be removed

Poor view from high rise buildings

Removal of two schools

Advantages of Site Number One:

Close to proposed Civic Center

Accessable from all parts of city - linked by interstate roads

Site could be developed by river to give a pleasing environment

Site Number Two

Boundaries:

North - 36th Street

South - Northeast 30th

East - Grand Boulevard

West - Eastern Avenue

Against Site Number Two:

On fringe of low income area - main patients of University Hospital

Heavy concentration of traffic on two sides

Advantages of Site Number Two:

Good Residential area

Present location of Medical Health Offices - could be incorporated into site plan

No clearance of land

Advantages of Site Number Two - continued:

Area North of 36th could be used for expansion

State Owned Land

Close to interstate highway

No foreseeable noise problems

Site Number Three

Boundaries:

North - S.E.22nd Street

South - Grand Boulevard

East - Bryant Avenue

West - East Avenue

Against Site Number Three:

Light to heavy industrial area of city

Oil Manufacturing area

Only major park area on southeast side of town

Close to Tinker Air Force Base (noise problem)

Advantages of Site Number Three:

City owned land

Up grading of surrounding slum area

Close to Interstate Roads

FINAL SELECTION OF SITE

Site number two has been selected primarily because of the few disadvantages of the site. The heavy traffic disadvantage can be relieved by proper entrances and exits to the selected site and offers no serious problem.

This site offers 160 acres or approximately 7,000,000 square feet for location of the center an in addition, north of 36th street is another 160 acres of land which is available for developemnt. Surrounding this site is located middle to high middle income housing additions with land still available for future expansion and development.

Shopping centers and motels are located within six blocks of the proposed site and are suitable to handle the needs of the Medical Center. Within a 10 block radius are located four elementary schools and one junior-senior high school along with parks, playgrounds, and recreation centers.

FIGURE NUMBER 5 - GENERAL SITE MAP

FIGURE NUMBER 6 - SITE SELECTED MAP

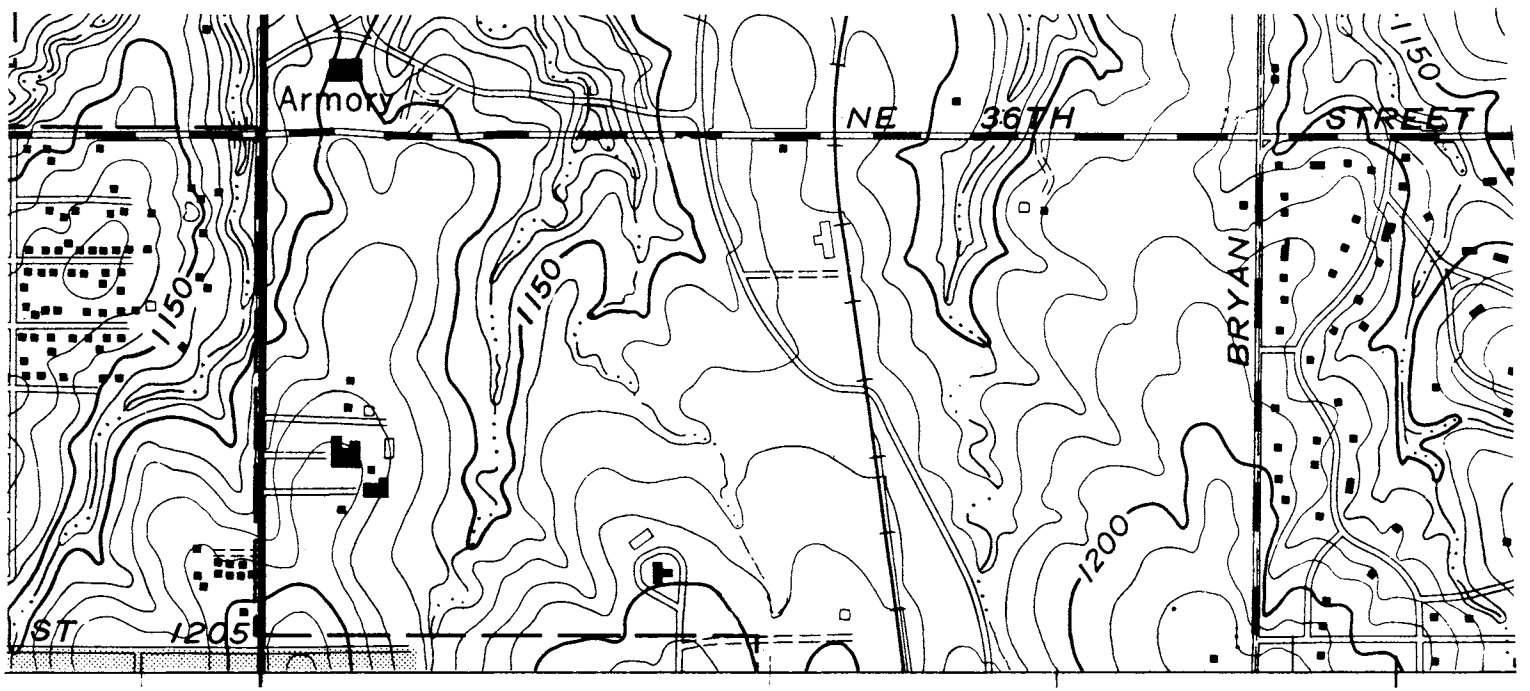


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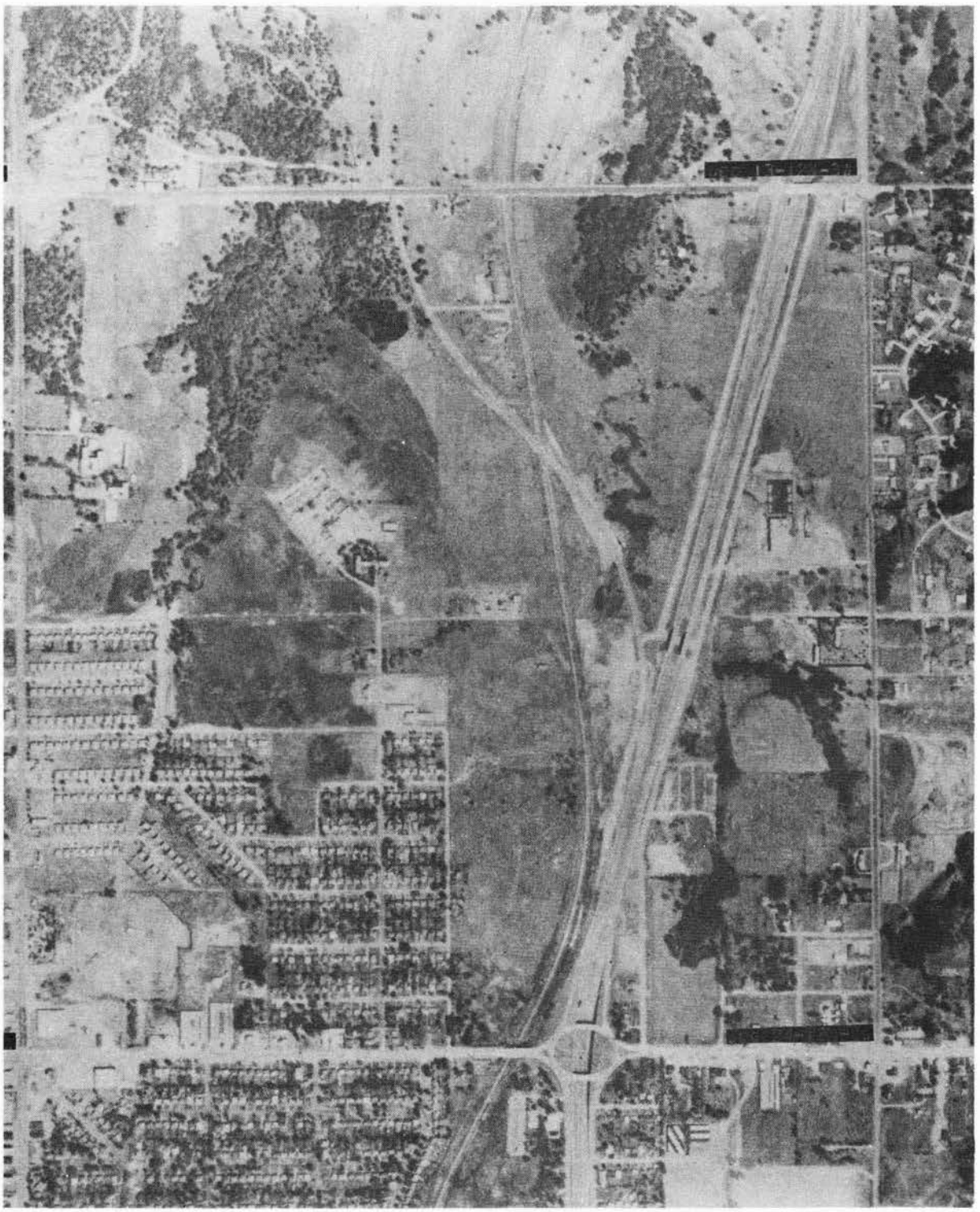
FIGURE NUMBER 7 - PLOT PHOTO



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CHAPTER VII

A TEACHING HOSPITAL'S GENERAL ARRANGEMENTS

The general arrangement of hospital functions is basic among all hospitals. You must be able to get a patient from one point to another in the most direct route in the shortest time. The following general arrangements are considered most important.

A. If possible, the in-patient area should be arranged vertically in the building.

   1. This should permit adequate elevator space, (commonly lacking in hospitals). The following points with regard to the elevator are considered important.

      a. There should be an adequate number of elevators.

      b. Elevators should be of a type which will permit maned operation during peek hours.

      c. Elevators should be large enough to accommodate bulky equipment.

      d. Separate service elevators are desirable.

   2. It is best if the vertical arrangement of the in-patient facilities will connect on horizontal levels with the office space, laboratory space and out-patient clinic of the appropriate department.

B. There are several facilities to which patients must be transported from all nursing units. This flow of traffic is a real administrative problem in maintaining a ward and it seems logical that as much attention as possible be paid to convenience in transporting patients. Units to be utilized by all services include:

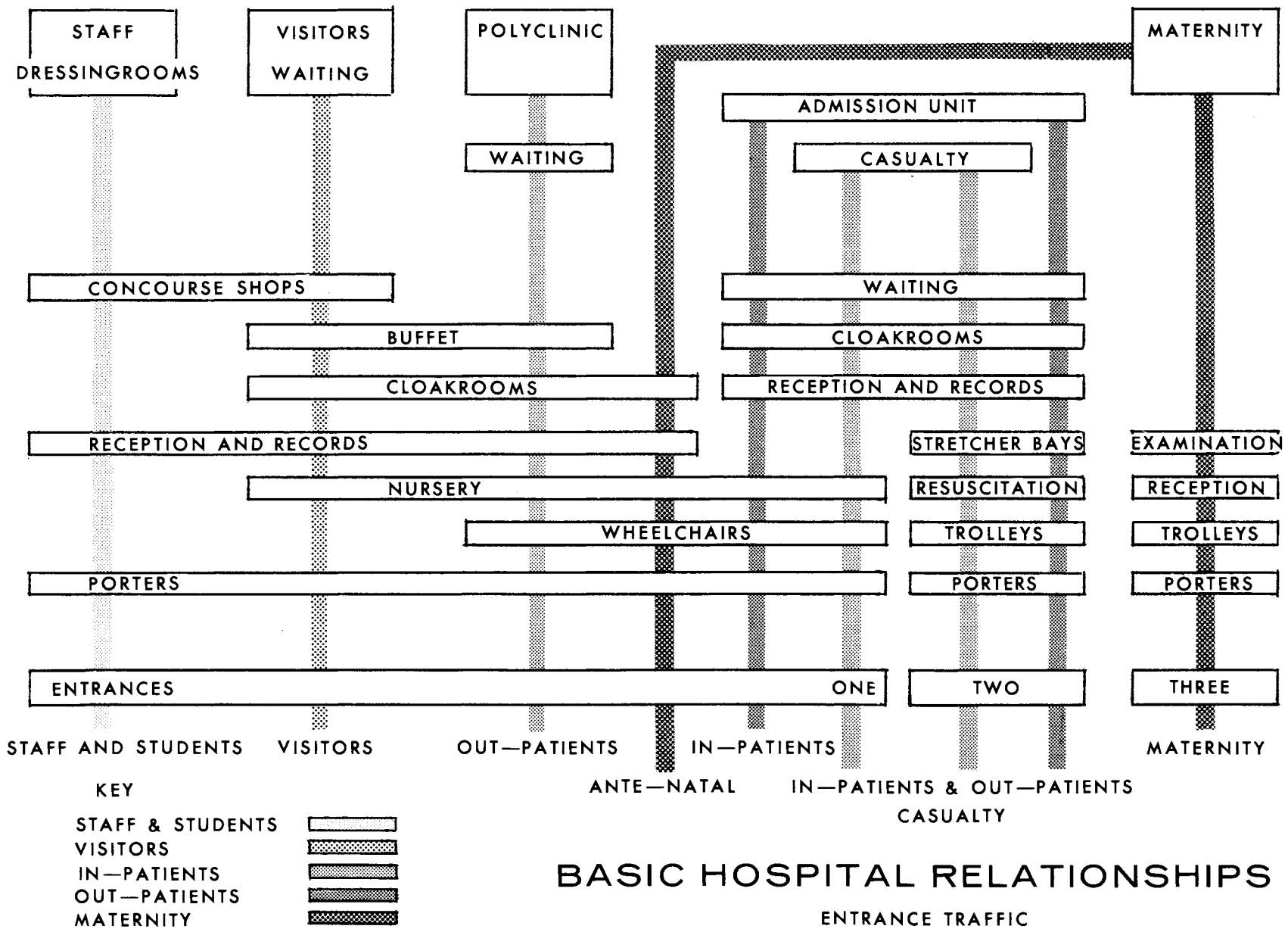
1. Admitting Office
2. X-Ray Department
3. Operating Room
4. In-patient Dining Room (if used)
5. Needs of specific wards which will be detailed later in the report.

C. The overall plan should minimize ward traffic and traffic should be routed to permit as little disturbance of ward routine as possible.

D. The management of linen supplies, central supply and pharmacy supply will be extremely important in efficient ward management. The method by which these supplies are to be delivered will materially influence the nursing unit planning. Efficient central supply of all of these materials should be strongly considered to prevent the ward from having the responsibility of maintaining large stocks, etc. There should be a simple method of communication with supply sources resulting in rapid delivery of needed materials.

E. The collection and delivery of the numerous specimens from patients is a nursing problem and depending upon the solution of this a decision must be made concerning the availability of ward refrigerators for specimens.

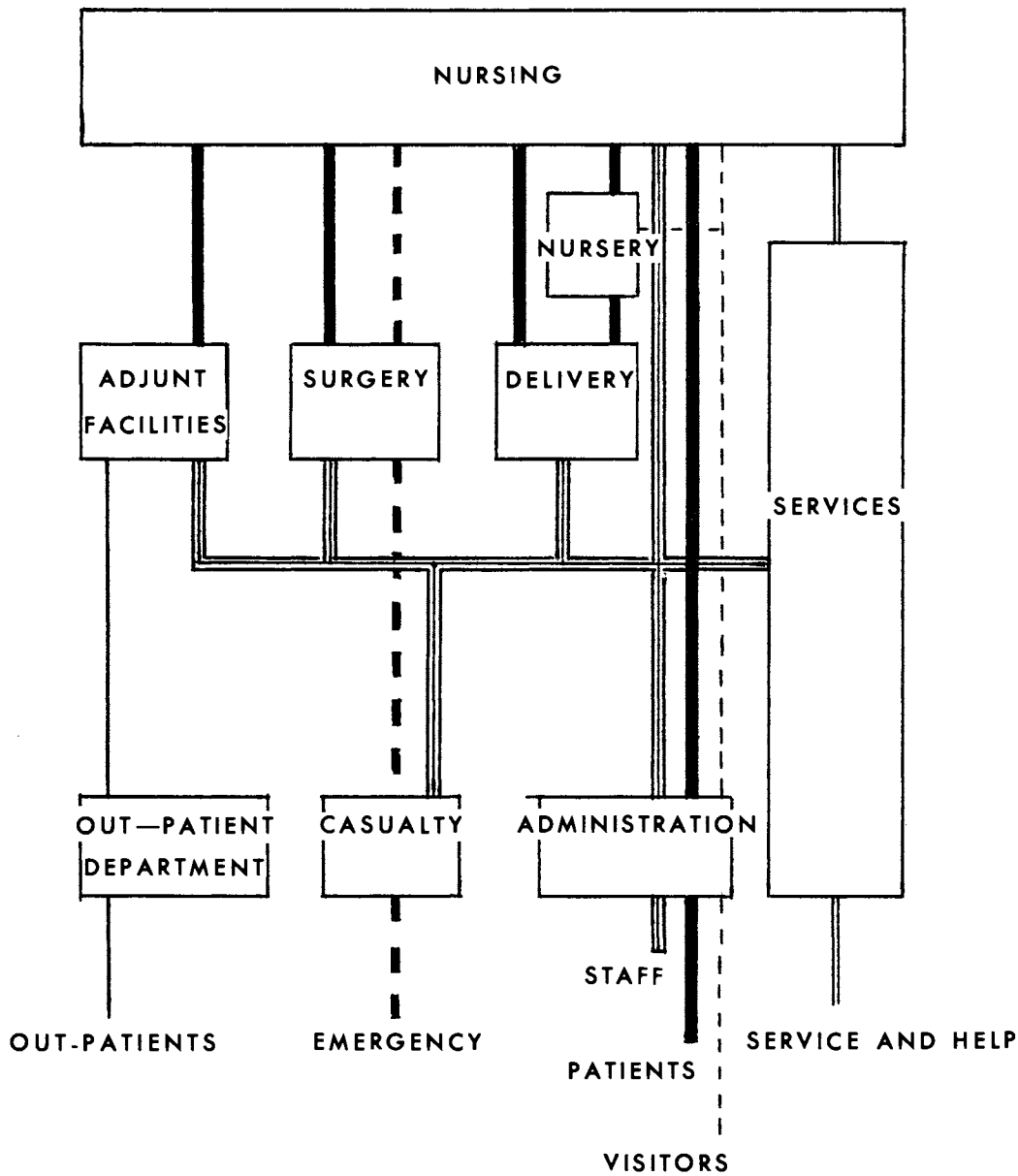
FIGURE NUMBER 8



BASIC HOSPITAL RELATIONSHIPS

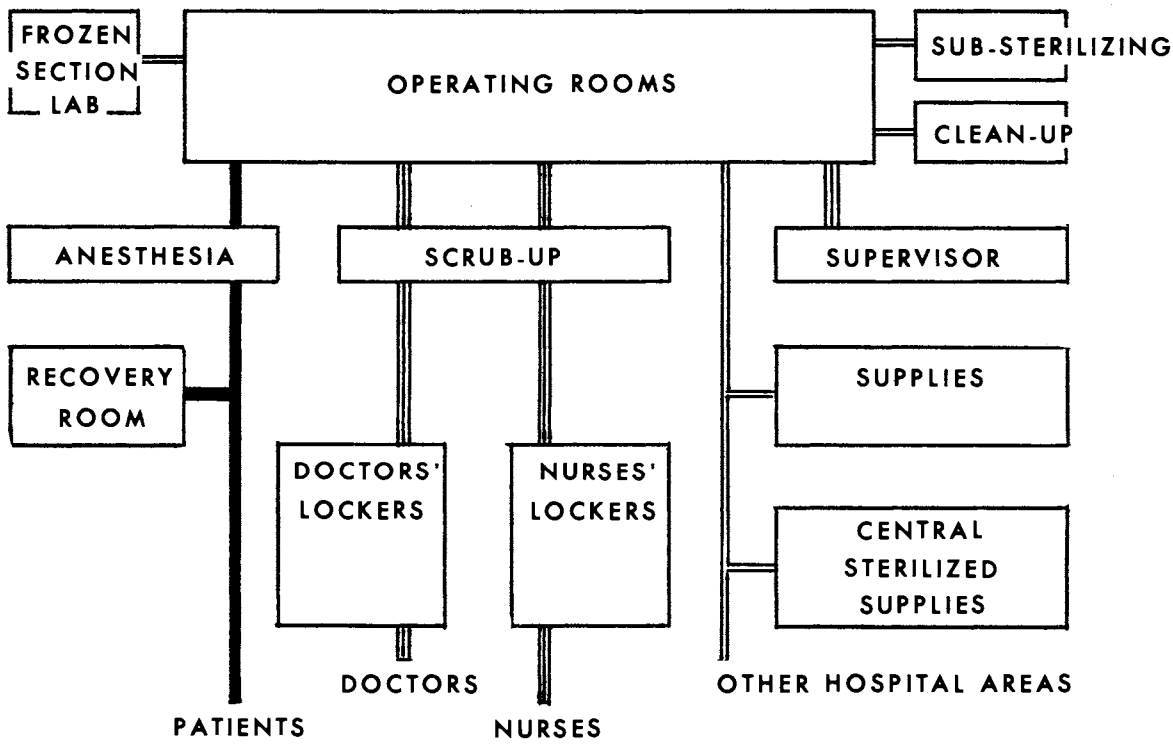
ENTRANCE TRAFFIC

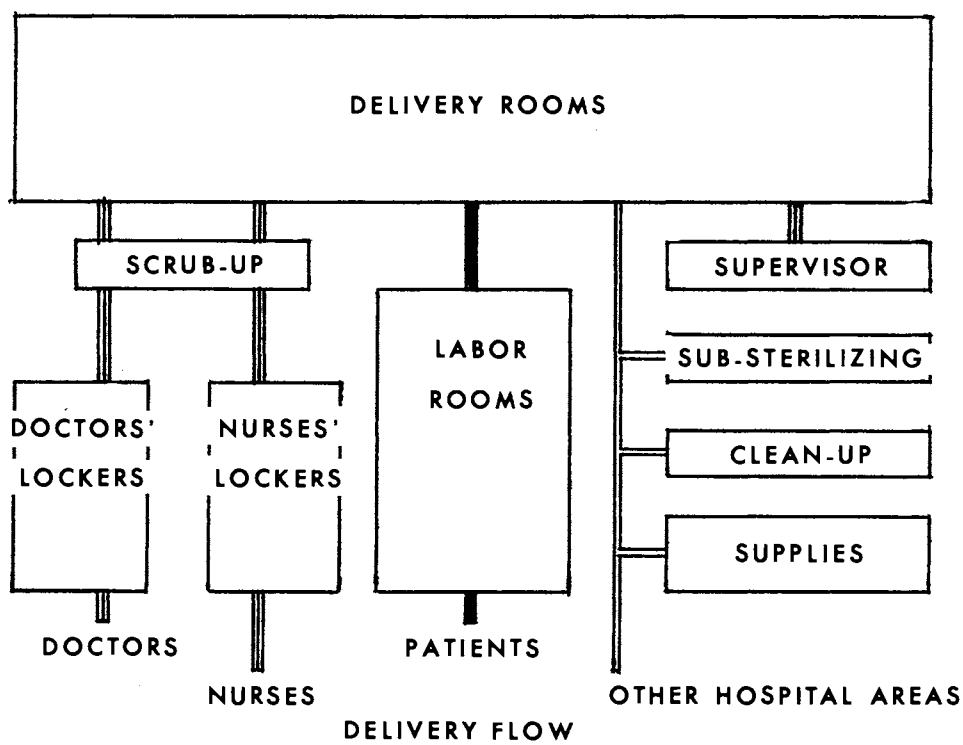
FIGURE NUMBER 9



KEY FLOW CHART

FIGURE NUMBER 10





SURGERY AND DELIVERY FLOW CHART

CHAPTER VIII

PRELIMINARY SPACE REQUIREMENTS

The following pages show all of the related and sub-related departments in a Teaching Hospital. Each department has been broken down into in-patient facilities, out-patient facilities, staff and student requirements. From this point the preliminary design takes place and the hospital begins to take shape.

TABLE I

NURSING UNIT BED ALLOCATIONS

(Based on Oklahoma Medical Center Requirements)

Surgical	50%	
Medical	30%	
Obstetrical	25%	
Pediatric	06%	
Miscellaneous	12%	
Surgical		325
General	85	
Thoracic	15	
Urology	40	
Orthopedic	80	
Eye	25	
Oral	10	
E.N.T.	20	
Neurosurgery	40	
Plastic	10	
Medicine		100
Pediatrics		150
Obstetrics and Gynecology		105
Psychiatry		100
PreMature		30
Radiology		10
Dermatology		14
Total Number of Beds		834

TABLE II

CONFERENCE ROOMS

Wards:

2 rooms for 100 persons each

6 rooms for 25 persons each

24 rooms for 10 persons each (1 per ward)

Departmental:

1 room for 50 persons each	Out-Patient Department
3 rooms for 40 persons each	Pediatrics (2) Anesthesia (1)
3 rooms for 35 persons each	Out-Patient Department
2 rooms for 30 persons each	Dermatology and Psychiatry
2 rooms for 25 persons each	General and Orthopedic Surgery
1 room for 20 persons	Obstetrics and Gynecology
1 room for 15 persons	G. U.
2 rooms for 12 persons each	Eye and Neurosurgery
5 rooms for 10 persons each	Psychiatry (2), Anesthesia, Oral Surgery and E.N.T.
1 room for 6 persons	Thoracic Surgery

Medical Center

2 rooms for 250 persons each

1 room for 200 persons

Conference Rooms Allotted - 56 Conference Rooms requested

7 rooms in Out-Patient Department (4 for 40, 3 for 25)

4 large rooms (1 for 300, 3 for 100)

6-8 ward conference rooms for 25 (1 for each 40 to 100 beds)

24 ward conference rooms for 10 (1 for each ward)

TABLE III

DEPARTMENTS AND SERVICES FOR A TEACHING HOSPITAL

A. Directly Related to Patient Care

1. Anesthesia
2. Dermatology
3. Gynecology and Obstetrics
4. Medicine
5. Ophthalmology
6. Orthopedics
7. E.N.T.
8. Pathology
9. Clinical Laboratories
   a. Clinical Chemistry
   b. Blood Bank and General Clinical Pathology
   c. Surgical Pathology and Necropsy
10. Radiology
11. Pediatrics
12. Physical Medicine
   a. Physical Therapy
   b. Occupational Therapy
13. Psychiatry
   a. O.T.
   b. P.T.
   c. R.T.
14. Preventive Medicine
15. Surgery

A. continued:

16. Oral Surgery

17. G. U.

18. Cystoscopy

19. Central Supply

20. O. R.

21. Emergency Room

22. Administration (Records)

23. Personnel Health

24. Admitting

25. Clinics

26. Dietary

27. Recovery Room

28. Neurosurgery

29. Plastic Surgery

30. Chest Surgery

31. Heart Station

32. Neurology

33. Research Laboratories

34. Nursery

35. Delivery Rooms

36. E. E. G. Laboratories

37. Social Service and Public Welfare

38. Nursing Service

39. Rehabilitation

40. Infectious Disease Service

A. continued:

41. Waiting Areas

a. Wards

b. O. B. Services

c. Recovery Room

d. Private Patients

B. Administration

1. Business Office

a. Payroll

b. Personnel

1. Health Service

2. Pre-school Nursery

c. Purchasing

d. Records

1. Medical Records

2. Machine Records

2. Student-Employee Health Service

C. Overlapping Services

1. Admitting and Discharge

a. Information

b. Traffic Control

2. Cashier Section

3. Central Stores

a. Moving

b. Storage

c. Shipping and Receiving

C. continued:

4. Laundry

5. Housekeeping

6. Physical Plant Operations and Maintenance

7. Social Service

8. Nursing Service

a. Volunteers -

b. Beauty and Barber Shops, Snack Bars

D. Supporting Services

1. Agency Personnel

2. Postal Service

3. Reproduction - Mimeograph, Printing, and Photography

4. Brace Shop

5. Supply for Research and Out-Patient Dispensing

6. Pharmacy

E. Educational Functions

1. Student Facilities - Nursing, Medical, Graduate and Technical

a. Locker Rooms

b. Lounges

c. On-Call Rooms

2. House-Staff Facilities

a. Locker Rooms

b. Lounges

c. On-Call Rooms

3. Postgraduate Facilities

DEPARTMENT OF ANESTHESIOLOGY

Description: The department of Anesthesiology is responsible for the pre-medication, induction, anesthesia, and return to consciousness of the surgical patient, as well as for the administration of anesthetic blocks to the non-surgical patient.

Space Requirement

Area	Square Feet
Department Chairman	150
Assistant Department Chairman	150
Staff Offices 12 @ 120	1,440
Department Secretary 2 @ 120	240
Stenographers 4 @ 140	560
Conference Room - Library	300
Storage Area	100
Student Offices 4 @ 120	480
Resident Offices 4 @ 100	400
Total Square Feet	3,820

Relationship:

Immediate approximation to:

a. Operating rooms

b. Recovery rooms

c. Intensive care units

Essential Areas

a. Operating room

b. Postanesthesia

c. Clinic care areas

DERMATOLOGY

Description: The science which treats the skin, its structure, functions, and diseases.

Space Requirement

Area	Square Feet
Staff Facilities	
Staff Office	120
Residents Offices 4 @ 120	480
Secretary	140
Library and Conference	340
Venereal Disease Section	140
Department Chairman	120
Secretary	120
Residents Offices 4 @ 100	400
Files and Records	200
	2,060
Out-Patient Department	
Examination Rooms 12 @ 80	960
Physcotherapy	90
Minor Surgery	90
Drug and Supply	120
Dressing Room 4 @ 50	200
X-Ray Treatment	90
Radium Treatment	90
Mycology Laboratory	220

Dermatology continued:

Out-Patient Department - continued:

Area	Square Feet
Histology Laboratory	220
Venereal Disease Interview Room 2 @ 80	160
Venereal Disease Examination Room 2 @ 90	180
	2,420
Total Square Feet	4,480

OBSTETRICS, GYNECOLOGY AND NEW BORN AND PREMATURE

Description: These three departments, operating as a unit, are considered sterile areas due to the infants low immunity to disease.

Space Requirement

Area	Square Feet
Obstetrics	
Delivery Rooms	
Postpartum (six bed recovery)	600
Clinical	
Private	
Waiting Room	250
Delivery Room 4 @ 300	1,200
Labor Rooms 5 @ 100 with bath and shower	500
Work Room	120
Doctor's Locker Room and Lounge	300
Student's Locker Room and Lounge	300
Nurse's Locker Room and Lounge	300
Special Projects Room	280
Nursing Station	60
Sterilization	60
	3,970
Gynecology	
Staff Facilities	
Director's Office	210
Assistant's Office	140

Obstetrics, etc. continued:

Area	Square Feet
Gynecology	
Staff Facilities - continued:	
Secretary	280
Staff Offices 6 @ 140	840
Chief Residents Office 2 @ 200	400
Conference Room and Library	350
Storage Area	100
	2,320
Out-Patient Department	
File Room	400
Storage Room	410
Cold Storage Room	200
Examination Room 20 @ 40	800
	1,810
New Born and Premature Service	
Staff Facilities	
Nursing Supervisor	120
Nursing Coordinator	100
Medical Director	120
Residents Office 4 @ 100	400
Secretary	240
Conference Room	200
Patient Demonstration Classroom	600
Demonstration and Treatment Room	300

New Born and Premature Service

Staff Facilities - continued:

	Square Feet
Storage Area for Nurseries	200
Nursing Work Area	200
Parent Conference and Demonstration Room	200
Student Laboratory 2 @ 200	400

Recommended Double Halls

One for cleaning, parents, and exits

One for supplies, nurses and doctors

Nursing Unit Requirements

Staff Sleeping Areas

Double Room for Staff

Double Room for Females

Four Rooms for Eight House Offices @150	600
Four Rooms for Sixteen Medical Students @300	1,200

In-Patient Department

New Born Nursery

2 @ 40' x 30'	2,400
6-68 cribs	2,100
Nursing Station	600
Nurse's Locker, Doctor's Locker	600

Premature Nursery

44-50 cribs	1,500
Nurses Station	450
Ancillary Area	450

In-Patient Department - continued

	Square Feet
Observation Nursery 10' x 60'	600
Nurses's Station	120
Ancillary Area	120
	13,820
Total Square Feet	21,922

MEDICAL CLINIC

Description: The medical clinic is made up of examining suites in which patients are examined for redistribution to other out-patient departments.

Space Requirement

Area	Square Feet
Staff Facilities	
Medical Offices 4 @ 100	400
Student Offices 10 @ 80	800
Conference and Library Room	180
Large Conference Room	500
Locker Room (50 people)	250
Student Laboratory	150
	2,280
Out-Patient Department	
Reception	
Charting Area	100
Examination Area (weight and temperature)	100
Specimens Area	150
Examining Suites (need 34)	
Examining Room (8' x 10')	2,720
Interviewing Room (8' x 7')	2,904
Special Procedures Room (12' x 15')	180
	6,154
Total Square Feet	8,434

Relationship: Should be near X-Ray and Heart Station.

OPHTHALMOLOGY

Description: Ophthalmology is primarily an out-patient department because of the minor surgery that is required. Although the replacement of eyes is becoming frequent, the examination and treatment of the eye and disease associated with the eye are being detected more readily in the clinics, therefore limiting the necessity for in-patient facilities.

Space Requirement

Area	Square Feet
Staff Facilities	
Faculty Chairman	160
Assistant Chairman	140
Secretary	200
Residents Offices 6 @ 80	480
Staff Offices 4 @ 140	560
Library and Conference Room	420
Storage	200
	2,160
Out-Patient Department	
Refraction Room 3 @ 140	420
Student Examination Room 2 @ 360	720
Minor Surgery	420
Dark Room 2 @ 200	400
Staff Laboratory	420
Eye Bank	800
Examination Room (darkened) 10 @ 40	400
Consultation Rooms 2 @ 100	200
	3,780
Total Square Feet	5,940

ORTHOPEDIC SURGERY

Space Requirement

Area	Square Feet
Staff Facilities	
Chairman	160
Chairman Staff Members 4 @ 120	480
Secretaries (3)	200
Volunteer Facility	120
Conference and Library	420
Resident's Office	140
Micro-Study Room	160
Operating Suite	500
	2,180
Supporting Facilities	
X-Ray Department (in-patient and out-patient)	
Surgery	
Physical Therapy	
Occupational Therapy	
Brace Shop	
Out-Patient Department	
Clinical Laboratory	300
Examination Rooms 20 @ 100	2,000
Consulting Rooms 2 @ 120	240
Plaster Rooms	
Removal	200
Application	300
Anesthetic	100
Pathological Laboratory	100
	3,240
Total Square Feet	5,420

OTO-RHINO-LARYNGOLOGY DEPARTMENT

Description: Oto-Rhino-Largynology deals with diseases of the ear, nose and throat.

Space Requirement

Area	Square Feet
Staff Facilities	
Director's Office	120
Secretary	120
Examination Rooms 10 @ 80	800
Treatment Rooms 2 @ 100	200
Conference Room	200
Total Square Feet	1,440

Relationship:

Near Neurology

Ophthalmology

Dermatology

X-Ray

PATHOLOGY LABORATORIES

Description: In a Medical Center this is where the freshmen start their basic knowledge of the human body.

The Pathology Laboratories are made up of:

Morbid Anatomy and Histology

Clinical Pathology

Chemical Pathology

Space Requirement

Area	Square Feet
Staff Facilities	
Morbid Anatomy and Histology	
Director's Office	140
Secretary	120
Research Laboratory	150
Student Laboratory	100
Store Room	75
Technician's Laboratory	300
	885
Clinical Pathology	
Director's Office	120
Secretary	120
Laboratory	150
Student's Office 4 @ 80	320
Blood Bank	100
Hematology Laboratory	360
Bacteriologists Laboratory	360

	Square Feet
Clinical Pathology - continued:	
Animal Houses	
Uninfected Rooms 2 @ 100	200
Infected Rooms 2 @ 100	200
Food Kitchen and Storage	120
	2,050
Chemical Pathology	
Director's Office	120
Secretary	120
Laboratory	150
Dark Room	40
Chemical Laboratory	360
Equipment Wash Up	250
	1,040
Total Square Feet	3,975

Relationship: Their relationship is to the Mortuary Block which should be located in an auspicious location because of the odor and removal of bodys.

CLINICAL LABORATORIES

Space Requirement

Area	Square Feet
Staff Facilities	
Director	240
Secretary	140
Associate Director	140
Chief Resident and Residents	140
Teaching Supervisor	100
Chief Technologist	100
Central Office and Records	200
Laboratories	
General Storeroom	200
General Dishwashing	100
Clinical Microbiology	
Bacteriology Office	140
Laboratory	640
Blood Bank	
Director's Office	300
Donor Waiting Room	200
Blood Drawing Room 4 @ 80	320
Recovery Room 4 @ 80	320
Donor Screening	240
Secretary and Records Room	200
Blood Processing	210
X-Matching Area	400
Special Problems	400
Freezer Room	200

	Square Feet
Serology	
Venereal Laboratory	300
Other Laboratories	300
Hematology	
Hematologist and Research Office	400
Coagulation	300
Secretary	240
Laboratory 2 @ 500	1,000
Urinalysis	
Laboratories	200
Surgical Pathology	
Director's Office	140
Secretary Office	140
Tissue Laboratory	220
Resident Laboratory	225
Photography	60
Storeroom	100
Cytology	
Director's Office	140
Secretary	140
Laboratories (Cytology and Student) 2 @ 200	400
Records and Storeroom	60
Morgue and Autopsy	
Cadaver Storage	1,440
Embalming Room	200
Crematory	200

	Square Feet
Morgue and Autopsy - continued:	
Morgue (pathology)	1,000
Mortician Office	140
Storage Room	200
Cold Room	100
Viewing Room	300
Total Square Feet	12,875

CLINICAL CHEMISTRY AND TOXICOLOGY AREAS

Space Requirement

Area	Square Feet
Staff and Public Facilities	
Reception Area, Specimen Processing	150
Toilets 2 @ 100	200
Locker Areas (8 students, 50 employees) 2 @ 175	350
Cart and Truck Port	50
Resident and Fellow Area	
Office and Laboratory	200
Conference and Lecture Library Room	350
Offices	
Director's Office	300
Assistant Professor Office	215
Secretary	215
Unit Managers Office	120
Record and Filing Area	230
General Office Work Area	225
Chief Technicians Office	150
Computation and Drafting Room	200
Emergency Laboratory and On-Call Area	200
Service Areas and Facilities	
Instrument Repair and Glassblowing	220
Preparation Room	250
Wash Room and Sterilizing	100

	Square Feet
Storage Area, Controlled Temperature Facilities	
One General Laboratory Supply Store and one Chemical Store Room	200
Walk-in Freezer Refrigerator	100
Vault	60
Gas Cylinder Storage Vault	25
Laboratories	
Student and Teaching Laboratory	200
Reagent Preparation Laboratory	80
Instrument Laboratory with Dark Room	80
Automatic Analysis Laboratory	200
General Chemical Laboratory	200
Chromatography Laboratory	100
P.B.I. Laboratory	60
Specialized Instrument Laboratory	600
Radioactivity and Isotope Laboratory	180
Special Chemistry Laboratory	500
Microchemistry Laboratory	200
Endocrine Laboratory	600
Clinical Toxicology Area	820
Development Laboratory	500
Staff Research Laboratory	700
Total Square Feet	9,130

RADIOLOGY

Description: This is one of the most important of the essential services and if duplication is to be avoided, it must be in a position accessible to casualty, out-patients, and in-patients. It should be on the same level as the casualty department, with separate entrances for casualty and out-patients and another for in-patients.

Space Requirement

Area	Square Feet
Staff Facilities	
Department Head	220
Department Secretary	240
Associate Radiologist	180
Secretary Pool	200
Film Library	370
General Staff Laboratories 2 @ 160	320
Reception	100
Business Office	140
	1,770
Therapy	
Thermo Hot Laboratory	750
Anesthesiology Therapy	280
Dressing Rooms 2 @ 175	350
Examination Rooms 6 @ 90	540
Deep Therapy	310
Theragist	200
Conference Room	120

	Square Feet
Therapy - continued:	
Radiation Room	350
Storage	100
Superficial Therapy	140
Vandergraf Room	550
	3,690
Diagnostic	
Radiation Fluorscope	200
Radio Fluorscope - Cline	260
Radio Fluorscope - Image	150
Chest Kyno	260
Dark Room	280
Chief Technician	90
Neuro Radiology	240
Dark Room (wet viewing)	170
Orthopedic Radiology	220
Laiumographic	160
Portable X-Ray	160
Men's Dressing Room	160
Women's Dressing Room	160
Pediatric Radiology	300
General Radiology	300
Conference and Class Room	320
Film Interrogation	360
Residents Study	160

	Square Feet
Diagnostic - continued:	
Cardian and Serroligest	560
Laboratory	300
Treatment Room	1,000
	5,810
Total Square Feet	11,530

PEDIATRIC

Description: A department dealing in children's diseases, pediatrics is one of the special areas of any hospital. There is no other place in a hospital where more care and understanding is needed.

To take a child from its parents and place him into a strange environment can produce a lasting memory especially if it is bad. Therefore the environment into which he is placed should be one that is of character and freedom. It is his room and surrounding areas which will be the best help to his recovery in such a manner to blot out any unpleasant memory.

Space Requirement

Area	Square Feet
Staff Facilities	
Chairman	200
Assistant Chairman	140
Secretary 2 @ 160	320
Conference Rooms 2 @ 350	700
Library	600
Faculty Members 21 @ 140	2,940
Secretary Offices 15 @ 140	2,100
Residents Offices 2 @ 125	250
Departmental Service Laboratory	
Bacteriology	600
Virology	600
Hematology	600

	Square Feet
Departmental Service Laboratory - continued:	
Cardiovascular	600
Endocrinology	600
Neurology	600
Residents	400
Storage Rooms 2 @ 160	320
Private Examining Rooms 4 @ 100	400
Postdoctoral Fellows 4 @ 200	800
Research Laboratory Space	
Cold Rooms	200
Animal Rooms	400
Laboratory	4,000
Waiting Rooms	225
Data Room	250
Student Laboratory	400
Special Projects Room	400
Research Assistants 2 @ 140	280
	18,925
Out-Patient Department	
Conference Room	350
Faculty Student Checking Rooms (4)	320
Playroom	250
Isolation Room	150
Weighing Room	100
Treatment Room 2 @ 250	500

	Square Feet
Out-Patient Department - continued:	
Pediatric Clinic Director's Office	210
Pediatric Clinic Secretaries Office	140
Examination Rooms 40 @ 90	3,600
Social Workers 2 @ 120	240
Psychologist	360
Child Developmentalist	120
Special Educational Teachers 2 @ 120	240
	6,580
Total Square Feet	25,505

PHYSIO-THERAPY DEPARTMENT

Description: Physio-Therapeutics are treatments by which many diseases and ailments which were entirely neglected or considered surgical cases are now relieved or cured with little medicine and without surgery.

The basic areas of treatment for these cases are:

Solaria and Sun-Decks

Hydro-Therapeutic

Electro-Therapeutic

Mechano-Therapy

Occupational Therapy

Space Requirement

Area	Square Feet
Facilities	
Director's Office	120
Assistant Director's Office	120
Secretary	100
Faculty Office 12 @ 200	2,400
Residents Office 12 @ 140	1,680
Psychiatrist Office 6 @ 280	1,680
Sociologist Office 6 @ 280	1,680
Examination Rooms 24 @ 100	2,400
Conference Rooms 2 @ 350	700
Library	600

	Square Feet
Conference Rooms	
One for Fifty persons	500
Four to handle Ten persons 4 @ 120	480
Film and Tape Rooms	
Gymnasium	4,000
Occupational Therapy Area	1,600
Total Square Feet	18,060

SURGERY

Description: It is generally accepted that the surgical unit of a large hospital be placed in a separate building of its own. This isolation is due to many factors. First and most important is the fact that surgery is considered the most serical area in the hospital therefore a tight control of entering and exiting is most important. Due to the large amount of air handling equipment (100 per cent fresh air required) an area devoted especially to mechanical equipment is generally accepted over the operating suites. The possibility of using portions of this area for observation galleries can be considered. Another factor which gives strength to the isolation of the suites is the structural system. Due to the complexity of the suites and utilization of every square foot, columns are best found hidden in the walls.

With the development of special operating room lighting there is the tendency to ignore the use of natural day light therefore giving more freedom in design.

Number of Operating Suites

No hard and fast rule can be given for computing the number of suites required in a hospital of any bed capacity. For general purposes it is reasonable to assume that a general hospital with 47 per cent surgical beds of 100 beds or less total should have a minimum of two suites and that larger institutions should be figured on a minimum basis of one added operating room for each 100 beds or fraction thereof.

By this method a need of five suites would be required. But, "Planning the Surgical Suite" by Warwick Smith gives a much closer estimate to the number of surgical suites necessary.

The average surgical patient stays 12.3 days. There are 255 operating room days a year. Consider four patients per operating room per day.

Using an 800 bed hospital with325 surgical beds, there will be 30 patients per year per bed giving total of 9,500 patients per year. With 255 operating room days per year and four patients per day average will give a total of 12 surgical suites.

Observation Galleries

Observation galleries are essential in the education of hospital personnel. They limit the spread of contagious disease and give more people a choice to see the operation performed. The principal types used are:

The portable gallery set up in the operating suite.

The raised platform gallery of permanent construction which is separately entered from the corridors and is screened off from the suite with glass.

The overhead gallery from which the observer looks directly down upon the operating table. (Most commonly used)

Closed circuit T.V. which has been covered in this report.

SURGICAL SUITES

Space Requirement

Area	Square Feet
Major Operating Room 4 @ 500	2,000
Minor Operating Room 2 @ 300	600
Anesthetizing Room	140
Sterilizing Room	200
Surgeon's Changing Room	400
Surgeon's Scrub Up	75
Nurse's Changing Room	400
Nurse's Station	100
Lounge	250
Surgeon's Consulting Room	200
Frozen Sections Laboratory	150
Appliance Store Room	300
Linen Store Room	200
Sterile Store Room	300
Proter's Storage	150
Post Operative Room	600
Recovery Room	800
Total Square Feet	7,865

THORACIC SURGERY

Space Requirement

Area	Square Feet
Staff Facilities 4 @ 120	480
Secretary	200
Conference Room	160
Operating Suites 2 @ 500	1,000
Total Square Feet	1,840

Supporting Facilities

- General Surgery
- Operating Rooms
- X-Ray Department
- Bronchoscopy Room (in-patient and out-patient)

In-Patient Relationships

- Children's Area
- Medical Chest Service

ORAL SURGERY

Space Requirement

Area	Square Feet
Staff Offices 6 @ 120	720
Secretary	240
Conference Library	220
Operating Suite 2 @ 500	1,000
Total Square Feet	2,180

Supporting Services

- Anesthesiology
- Operating Rooms
- Otorhinolaryngology
- X-Ray

NEURO SURGERY

Space Requirement

Area		Square Feet
Staff Facilities		
Staff Offices 5 @ 120		600
Secretary		160
Conference and Library		300
Operating Suites 2 @ 500		1,000
	Total Square Feet	2,060
Supporting Facilities		
General Surgery		
Neurology		
Ophthalmology		
X-Ray Department		
Total Square Feet Surgical Department		13,945

UROLOGY

Space Requirement

Area	Square Feet
Staff Facilities	
Department Chairman's Office	140
Secretary-Nurse	140
Doctor's Offices 2 @ 100	200
Secratary Area	220
Conference Room	300
Resident Cubicles 12 @ 80	960
	1,960
Out-Patient Department	
Consulting Treatment Room 4 @ 120	480
Treatment Rooms 4 @ 120	480
Cystoscopic 4 @ 300	1,200
Recovery Room	180
Dressing Cublicles 2 @ 50	100
Laboratory	180
Utility Room	140
	2,760
Total Square Feet	4,720

HEART STATION AND CATHETERIZATION

Description: This department is in demand by both in-patients and out-patients depending upon the needs by the individual patients. Some patients are required to enter as out-patients while others are held in the hospital for closer observation.

Space Requirement

Area	Square Feet
Staff Facilities	
Conference Rooms 6 @ 120	720
Student Offices 4 @ 100	400
Staff Offices 2 @ 140	280
Staff Laboratory	200
Secretary	80
Director Office	180
Assistant Director	100
Work Room	200
	2,160
Out-Patient Department	
Recording Room 8 beds @ 120	960
Sound Recording Room	100
Dark Room	80
Mounting Room	60
Storage Area	140
Catheterization Laboratory (15' x 20')	120
Gas Analyses Laboratories 2 @ 120	240
Pulmonary Laboratory	120

Out-Patient Department - continued

	Square Feet
Examining Rooms 4 @ 80	320
Electrocardiograph Room (6 beds)	600
Ballisto Cardiograph Room	120
Electrocardiograph Control Room	120
	2,980
Total Square Feet	5,140

CENTRAL SUPPLY

Space Requirement

Area	Square Feet
Staff Facilities	
Locker Rooms 2 @ 1,000	2,000
Small Conference Classroom	300
Supply Storage with Office (20' x 50')	1,000
Clean Uniform Storage (10' x 15')	150
Workshop for Equipment Repair	200
Executive Housekeeper Office	140
Assistant Housekeeper	140
Secretary	140
Supervisor Cublicles 8 @ 50	400
Staff Offices 2 @ 120	240
Secretaries 2 @ 80	160
	4,870
Laundry	
Office	140
Sorting and Marking	500
Storage	140
Clean Linen Storage	1,600
Sewing and Repair	200
Employee Lounge	250
Main Laundry	7,000
	9,830
Total Square Feet	14,700

Relationship: The Housekeeping Department is best related to the hospital by being in an adjoining building close to a steam supply.

CASUALTY DEPARTMENT

Description: The training a student receives in this area of the hospital is most important because of the quick recall and discussion that are needed to perhaps save a persons life. This department is staffed 24 hours and is equipped to handle minor to sub-critical patients. Critical and Obstetrical patients are routed around this department to their respective areas although, if the occasion presents itself, it could be handled.

There are several possibilities which arise in the emergency areas. (1) The patient is admitted, treated and then released. (2) In the case of obstetrical and critical cases routed to respective departments. (3) The patient is admitted, treated and held for 24 hours in the special holding ward.

This department gains its staff from Medicine, Surgery, and Pediatrics.

Space Requirement

Area	Square Feet
Facilities	
Waiting Room	300
Examination Rooms 10 @ 80	800
Registration	120
Nursing Station	250
Holding Ward	600
On Call Rooms 2 @ 120	240
Laboratories	250
Cast and Orthopedic Room	120
Total Square Feet	2,680

Relationships:

Near Out-Patient Department

Adjacent to X-Ray

Near Admitting Offices

PHARMACY AND DISPENSARY

Space Requirement

Area	Square Feet
Pharmacy	
Office 2 @ 140	280
Package Storage	300
Splint Storage	300
Narcotic Storage	60
Cold Storage	120
Bottle Storage	160
Pharmacy Work Room	1,780
	3,000
Dispensary	
Dispensing Room with Office	375
Dispenser's Office	140
Analytical Laboratory	100
Bottle Washing Room	140
Galenic Laboratory	200
Storage	1,000
Packing Room	220
Sterilization Department	
Hot Section	150
Cold Section	100
Toilets	80
Janitor's Closet	20
	2,525
Total Square Feet	5,525

DIETETICS

Description: Every patient in the hospital is dependent upon this department. Apart from those on special diet, 90-95 per cent of the patients are on a full diet within two days of entry into the hospital. The service insures the effecient delivery of food and dispersment through the wards. To avoid the trains of foodwagons trailing throughout the corridors, a faster and more effecient method of delivery has been established. By the use of service lifts and pantry kitchens on each floor, porter service and time is conserved.

Space Requirement

Area	Square Feet
Administrative and Department Space	
Directors Office	140
Central Department Office	1,200
Two Department Secretaries	
Four Typists	
Payroll Clerk	
Storage	
Assistant Director and Educational Director	240
Inservice Educational Class Room	240
Inservice Education and Methods Improvement	240
Department Conference Room and Library	200
Food Service and Production	
Central Kitchen	12,000
Receiving, Refrigeration, Storage and Pre-preparation	2,500

	Square Feet
Food Service and Production - continued:	
Cafeteria	18,000
Executive Dining Room	1,000
Food Administration Office	360
Cafeteria Supervisors Office	100
Patient Care Areas	
Service Kitchens - each to serve 60-80	1,000
Serving and Dining for Psychiatry	800
Formula Unit	400
Clean Up Room	150
Preparation Room	250
Station Offices for Dietetic Staff 4 @ 220	880
Station Offices for Non-professional Supervisors 4 @ 100	400
One for each major section	
Medicine	
Surgery	
Pediatrics	
Psychiatry	
Nutrition Clinic	690
Used by in and out-patients near Medical Clinic in Out-Patient Department	
Services	
House Staff Dining Rooms	1,800
Catering Station	100
Cafeteria	5,000
Total Square Feet	47,690

ADMINISTRATION

Description: The nerve center of any organization is the administration department. As in business a hospital's center is just as important. It is here where the patient first goes to be classified, admitted, and then, if it applies, billed. This is the first point where a patient becomes aware of the conditions under which he is being placed. At this point his anxiety increases and if not placed in the proper invironment will continue until it endangers his general condition. Therefore the environmental conditions of the main admitting area are of great importance toward the health and well being of the patient.

Space Requirement

Area	Square Feet
Hospital Administrator	300
Secretary	120
Assistant Administrator's Offices 2 @ 140	280
Secretary	120
Director of Nursing	220
Secretary	120
Assistant Director of Nursing	140
Staff Lounge and Conference Room	600
Admitting Office	300
Discharge Office	300
Cashier	200
Business Office	1,200
Vault	240

		Square Feet
Information Areas (as needed)	each	50
Public and Staff Toilets	as required	
Payroll Office		260
Purchasing Office		260
Student Employee Health Service Office		300
Appointments Office		200
Secretary Pool		850
Chaplains Office		200
Families Room		200
Heart Association Office		160
Cancer Society Office		160
Postal Service		600
Hospital Services		
Barber Shop		160
Beauty Shop		210
Drug Store		140
Total Square Feet		7,840

SOCIAL SERVICE DEPARTMENT

Description: The Social Service Department is a function related to both out-patient and in-patient needs. It serves as the distribution point for patients who can not afford to obtain medical care without financial assistance. After the patients first contact with this department the patient no longer requires its services.

Space Requirement

Area	Square Feet
Supervisors Offices 5 @ 160	800
Directors Office	160
Clerical Staff	320
Student Space (4 graduate offices)	640
Assistant Director	160
Secretary	140
Interview Rooms 4 @ 140	560
Medical Social Worker Offices 20 @ 140	2,800
Total Square Feet	5,580

Relationship: Central location to Hospital admitting.

DEPARTMENT OF PUBLIC WELFARE SERVICE

Space Requirement

Area	Square Feet
Medical Social Worker	140
Assistant Medical Social Worker	140
Crippled Children's Unit Supervisor	140
Assistant Crippled Children's Unit Supervisor	140
Interview Rooms 6 @ 80	480
Film and Clerical Workers	500
Total Square Feet	1,540

Relationship: Central to Hospital admitting.

MEDICAL RECORDS

Description: Every person, whether out-patient or in-patient, has a record which is kept from the day he first enters the hospital until long after his death. The Records Department is one of the most important non-medical services to the hospital because of the necessity of a competent medical record for each patient who re-enters the hospital. This department must supply upon a moments notice any record to any part of the hospital.

Space Requirement

Area	Square Feet
30 Booth Desk Reference Areas	150
Sidebinding and Microfilming	500
Central Offices for Receiving and Processing	300
Office for Librarian	120
Office Manager	120
Corresponding and Insurance Offices 4 @ 120	480
Records Storage Room	10,000
Secretary Office	550
Total Square Feet	12,220

Relationship: Near Admitting

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VITA

Larry Ken Blackledge

Candidate for the Degree of

Master of Architecture

Thesis: A TEACHING HOSPITAL FOR OKLAHOMA CITY, OKLAHOMA

Major Field: Architecture

Biographical:

Personal Data: Born in Bartlesville, Oklahoma, August 26, 1940, the son of Kenneth C. and Imo Gene Blackledge.

Education: Attended grade shcool in Lubbock, Texas, and Oklahoma City, Oklahoma; graduated from Harding High School in Oklahoma City, Oklahoma in 1958; received the Bachelor of Architecture Degree from Oklahoma State University in August, 1963; completed requirements for Master of Architecture in May, 1965.